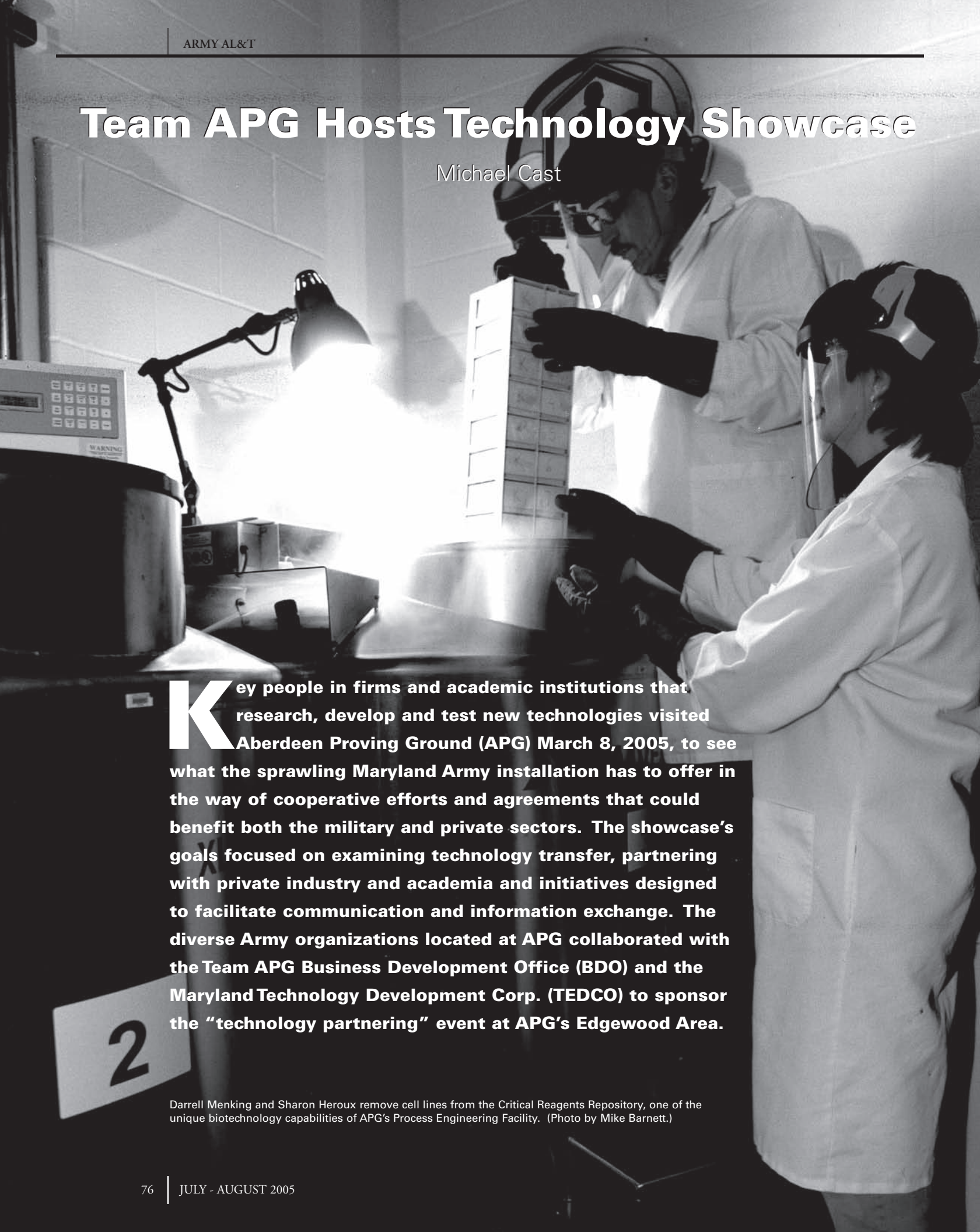
Team APG Hosts Technology Showcase

Michael Cast



Key people in firms and academic institutions that research, develop and test new technologies visited Aberdeen Proving Ground (APG) March 8, 2005, to see what the sprawling Maryland Army installation has to offer in the way of cooperative efforts and agreements that could benefit both the military and private sectors. The showcase's goals focused on examining technology transfer, partnering with private industry and academia and initiatives designed to facilitate communication and information exchange. The diverse Army organizations located at APG collaborated with the Team APG Business Development Office (BDO) and the Maryland Technology Development Corp. (TEDCO) to sponsor the "technology partnering" event at APG's Edgewood Area.

Darrell Menking and Sharon Heroux remove cell lines from the Critical Reagents Repository, one of the unique biotechnology capabilities of APG's Process Engineering Facility. (Photo by Mike Barnett.)

The showcase — one of five held at APG to date — focused on personal protective technologies. The Research, Development and Engineering Command is headquartered at the Edgewood Area and has a leading role in developing Soldier protective equipment, including masks and suits designed to shield them from chemical and biological threats.

The event featured presentations from this command's Edgewood Chemical Biological Center, Center for Health Promotion and Preventive Medicine and Medical Research Institute of Chemical Defense Medicine, as well as from the Aberdeen Test Center (ATC) and Army Research Laboratory (ARL), which both have facilities at APG's larger Aberdeen Area. Past showcases have introduced attendees from the private sector and academia to the various laboratories, research facilities, training organizations and array of testing sites located at the Aberdeen and Edgewood Areas.

Army organizations at APG, such as the Army Medical Research Institute of Chemical Defense, use the latest equipment for chemistry, analytical processes and other research and development efforts. (U.S. Army photo.)

TEDCO Executive Director Dr. Phillip Singerman told the showcase attendees that the program was designed to "efficiently introduce" them to the resources, facilities and capabilities at APG that focus on protective technologies. "There are 64 organizations on the Proving Ground, spanning the gamut of research, development, testing and engineering," Singerman explained. "The Army's interest in sponsoring a showcase of this type is to develop partnerships that produce enhanced protection for U.S. Soldiers. All of us are in this room to ensure that the men and women overseas [Afghanistan and Iraq] come back safely to their families," he continued.

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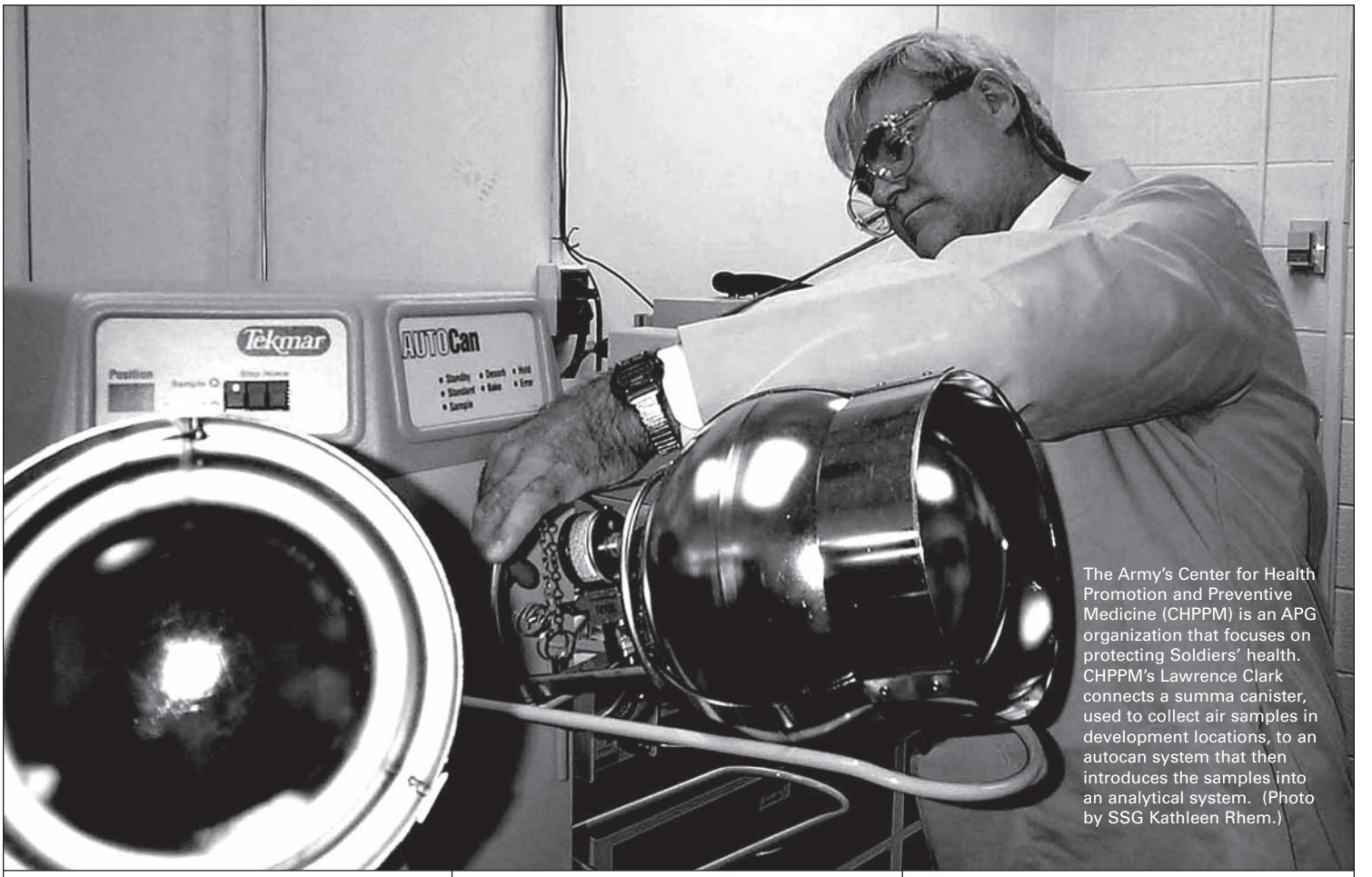
"While increased security measures at APG in the wake of the Sept. 11 attacks have made it more difficult to get onto the installation, 'community outreach' efforts to promote creative partnerships with academia and industry remain important," Singerman said.

The *Federal Technology Transfer Act of 1986* defines technology transfer as the movement of technical knowledge, data, designs, inventions or trade secrets from one organization to another, or from one application to another. This legislation encourages federal agencies to conduct joint research with nonfederal partners while protecting intellectual property that may be developed. It also encourages the formation of cooperative research and development agreements (CRADAs), which are negotiated agreements between specific laboratories and nonfederal partners that outline the terms and conditions under which work will be performed. CRADAs set out the scope of joint efforts and the resources to be provided by each party. They often contain provisions regarding licensing, commercialization and patent development.

TEDCO's Director of Technology Transfer Dr. Steven Fritz described several TEDCO initiatives for funding, including:

- The University Technology Development Fund. This fund aims to increase the commercialization potential of a university's intellectual property. The maximum award is $50,000.



The Army's Center for Health Promotion and Preventive Medicine (CHPPM) is an APG organization that focuses on protecting Soldiers' health. CHPPM's Lawrence Clark connects a summa canister, used to collect air samples in development locations, to an autocan system that then introduces the samples into an analytical system. (Photo by SSG Kathleen Rhem.)

• The Maryland Technology Transfer Fund. This fund provides a maximum award of $75,000 to develop technology-based products and services in collaboration with universities and federal laboratories in Maryland. Many Army organizations at APG are certified as federal laboratories by the Federal Laboratory Consortium of the Mid-Atlantic Region.

TEDCO's Technology Insertion Initiatives are new programs that provide "seed-fund" grants to companies to develop technology to meet Army requirements. Among these is the Aberdeen Technology Transfer Initiative (ATTI), a program begun about 3 years ago. Fritz said $1 million in seed money for the ATTI, the prime source of funding for Maryland's APG technology transfer programs, resulted from the advocacy of the state's two senators, Paul Sarbanes and Barbara Mikulski, as well as Rep. Dutch Ruppersberger, who represents District 2, where APG is located.

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The ATTI supports the development of private-sector "spin-in" commercial technologies to meet the Army's needs and the commercialization "spin-out" of military technologies developed at APG. Funding for the ATTI is provided by Congress through the Army Developmental Test Command (DTC). ATTI awards, usually $50,000, may be made to small, for-profit businesses involved with the development of spin-in or spin-out technologies. To be eligible for the award, commercial firms must have a technology transfer agreement with an APG organization.

The showcase highlighted three Maryland companies that received funding through the ATTI — BSCO Inc., of Forest Hill; Elkton-based Phoenix S&T; and QuickSilver Analytics Inc., of Abingdon.

BSCO, a firm that specializes in small fire-suppression systems, developed the Micro Fire Suppression System for testing by the ATC. Though the company's product is still in the research and development (R&D) phase, according to a news release from the Harford County Office of Economic Redevelopment, Northrop Grumman

and Clean Air America have already placed orders for systems that fill a "critical market niche."

Phoenix S&T, a company whose Web site says it "develops micro-scale, low-cost disposable polymer tools for protein profiling," is conducting R&D on an "automated nanospray system with nozzles and integrated reservoirs for sample storage" — in essence, a system that will assist in the analysis of molecules for drug discovery and clinical cancer diagnostics.

QuickSilver Analytics, which specializes in various defense-related services and products, is developing a "permanent injection mold" for BisKit, a state-of-the-art biological sampling kit for large areas. The company operates a DOD-certified mobile laboratory for "onsite environmental analysis of chemical-warfare and chemical warfare-related materiel."

Harold Barker of ATC's industrial X-ray facility was the first APG presenter of the day. His X-ray facility has developed technology that is capable of penetrating 24 inches of hardened steel, imaging microfibers and before and after test-event imagery.

Dr. Erica Valdes and Angela Farenwald check monitors in APG's Electron Microscopy Laboratory, known on post as "Microland." (Photo by Conrad Johnson.)

He was followed by a long line-up of other presenters describing APG facilities and capabilities, ranging from chemical sampling and analysis to systems for treating victims of chemical and biological attack and the National Center of Excellence for First Responder Technologies, an organization affiliated with the University of Pittsburgh's Joseph M. Katz Graduate School of Business Institute for Entrepreneurial Excellence. The center is designed to "help meet the technology needs of firefighters, law enforcement and emergency medical personnel in a post-9/11 world."

Steve Clark, DTC's proponent for technology transfer and a showcase organizer, emphasized the importance of partnerships between the military and private sectors in meeting America's technology needs. He encouraged attendees to visit the BDO section of the APG Science and Technology Board Web site at **http://stb.apg.army.mil/BDO**. Those interested in technology transfer programs at APG can also call the BDO at (410) 273-5062. For information about programs sponsored by TEDCO or the State of Maryland, visit **www.marylandtedco.org/home.html**.

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